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Class 381 ELECTRICAL AUDIO SIGNAL PROCESSING SYSTEMS AND DEVICES

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- 1** **BINAURAL AND STEREOPHONIC**
- 2 . Broadcast or multiplex stereo
- 3 .. FM final modulation
- 4 ... AM subcarrier
- 5 Four discrete channels
- 6 Having transmitter
- 7 Switch-type detector or modulator
- 8 Two diodes
- 9 Four or more diodes
- 10 Channel separation control
- 11 Automatic switchover between mono and stereo modes
- 12 Stereo indicators (e.g., stereo presence)
- 13 Antinoise
- 14 Having transmitter
- 15 .. AM or both AM and angle final modulation
- 16 ... Having transmitter
- 17 . Pseudo stereophonic
- 18 .. Pseudo quadrasonic
- 19 . Quadrasonic
- 20 .. Matrix
- 21 ... 4-2-4
- 22 Variable decoder
- 23 With encoder
- 23.1 . Hearing aid
- 300 . Stereo speaker arrangement
- 301 .. In furniture or clothing
- 302 .. In vehicle
- 303 .. Optimization
- 304 ... Enclosure orientation
- 305 ... Enclosure adaptation
- 306 .. With image presentation means
- 307 .. Surround (i.e., front plus rear or side)
- 308 .. In single baffle
- 309 .. Stereo earphone
- 310 ... Virtual positioning
- 311 ... Wireless or for use in diverse
- 26 . Stereo sound pickup device (microphone)
- 27 . Center channel
- 28 . Amplifier
- 54** **HELIUM SPEECH**
- 55** **AUDIO TRANSDUCER PROTECTION CIRCUITRY**
- 56** **MONITORING OF SOUND**
- 57 . Amplification control responsive to ambient sound
- 58** **MONITORING/MEASURING OF AUDIO DEVICES**
- 59 . Loudspeaker operation
- 60 . Testing of hearing aids

61	SOUND EFFECTS
62	. Tremelo or vibrato effects
63	. Reverberators
64	.. Mechanical (e.g., reverberation chamber)
65	... Helical spring
66	DEREVERBERATORS
67	STETHOSCOPES, ELECTRICAL
312	HEARING AIDS, ELECTRICAL
313	. Directional
314	. Programming interface circuitry
315	. Remote control, wireless, or alarm
316	. Frequency transposition
317	. Noise compensation circuit
318	.. Feedback suppression
319	. With vacuum tube amplifier
320	. Spectral control
321	. Wideband gain control
322	. Specified casing or housing
323	.. Power supply or programming interface terminals
324	.. Component mounting
325	.. Cerumen protection
326	.. Non-air-conducted sound delivery
327	.. Spectacle
328	.. Ear insert
329	... Device for manipulation
330	.. Hook over ear
331	.. Inductive pickup
70	ARTIFICIAL LARYNX, ELECTRICAL
71.1	ACOUSTICAL NOISE OR SOUND CANCELLATION
71.2	. Acoustic, nonairborne vibration sensing or counterwave emission
71.3	. From appliance
71.4	. Within cabin or compartment of vehicle
71.5	. Within duct
71.6	. Adjacent ear
71.7	. Particular transducer or enclosure structure
71.8	. Counterwave generation control path
71.9	.. Nonacoustically derived reference signal
71.11	.. Adaptive filter topology
71.12	.. Algorithm or formula (e.g., LMS, Filtered-X, etc.)
71.13	.. Analog or nonadaptive
71.14	.. Tonal noise or particular frequency or band
72	HEARING PROTECTORS, ELECTRICAL
73.1	SOUND OR NOISE MASKING
74	HEADPHONE CIRCUITS
75	MEGAPHONES
76	LECTERNS
77	ONE-WAY AUDIO SIGNAL PROGRAM DISTRIBUTION
78	. Drive-in
79	. Near field
80	. Multiple channel
81	.. With switching
82	. Public address system
83	.. Feedback suppression

<u>84</u>	.. Spare amplifier substitution
<u>85</u>	.. Speaker or channel switching
<u>86</u>	VEHICLE
<u>87</u>	HAVING NON-ELECTRICAL FEATURE (E.G., MOUNTING)
<u>89</u>	. Loudspeakers driven in given phase relationship
<u>332</u>	. And loudspeaker
<u>333</u>	.. With furniture, clothing, or image presentation means
<u>334</u>	.. Portable or for use in diverse environment
<u>335</u>	.. Plural diaphragms, compartments, or housings
<u>336</u>	.. Curved or angled housing
<u>91</u>	. Having microphone
<u>92</u>	DIRECTIVE CIRCUITS FOR MICROPHONES
<u>93</u>	FEEDBACK SUPPRESSION
<u>94.1</u>	NOISE OR DISTORTION SUPPRESSION
<u>94.2</u>	. Spectral adjustment
<u>94.3</u>	.. In multiple frequency bands
<u>94.4</u>	. Interpolation
<u>94.5</u>	. Soft switching, muting, or noise gating
<u>94.6</u>	. Hum or ground loop
<u>94.7</u>	. Using signal channel and noise channel
<u>94.8</u>	. Peak limiting or pulsive noise compensation
<u>94.9</u>	. Feedforward circuitry for transducer compensation
<u>95</u>	MICROPHONE FEEDBACK
<u>96</u>	LOUDSPEAKER FEEDBACK
<u>97</u>	INCLUDING PHASE CONTROL
<u>98</u>	INCLUDING FREQUENCY CONTROL
<u>99</u>	. Having crossover filter
<u>100</u>	.. With active device
<u>101</u>	. Automatic tone control
<u>102</u>	.. With amplitude control
<u>103</u>	. Having automatic equalizer circuit
<u>104</u>	INCLUDING AMPLITUDE OR VOLUME CONTROL
<u>105</u>	. Remote
<u>106</u>	. With amplitude compression/expansion
<u>107</u>	. Automatic
<u>108</u>	.. Including feedback
<u>109</u>	. With manual volume control
<u>110</u>	VOICE CONTROLLED
<u>111</u>	CIRCUITRY COMBINED WITH SPECIFIC TYPE MICROPHONE OR LOUDSPEAKER
<u>112</u>	. With carbon microphone
<u>113</u>	. With electrostatic microphone
<u>114</u>	. With piezoelectric microphone
<u>115</u>	. With magnetic microphone
<u>116</u>	. With electrostatic loudspeaker
<u>117</u>	. With magnetic loudspeaker
<u>118</u>	WITH MUSICAL INSTRUMENT
<u>119</u>	WITH MIXER
<u>120</u>	WITH AMPLIFIER
<u>121</u>	. Feedback
<u>122</u>	HAVING MICROPHONE
<u>123</u>	SWITCHING
<u>150</u>	ELECTRO-ACOUSTIC AUDIO TRANSDUCER
<u>151</u>	. Body contact wave transfer (e.g., bone conduction earphone, larynx microphone)
<u>152</u>	. Driven diverse static structure (e.g., wall, sounding board)
<u>337</u>	. Having acoustic wave modifying structure
<u>338</u>	.. With tubular waveguide or resonant element

<u>339</u>	.. Sound intensifying or spreading element
<u>340</u>	... Horn
<u>341</u>	.... Inverted, folded, or curled
<u>342</u>	.... Plural horns or diaphragms
<u>343</u>	.... Phase plug
<u>344</u>	... Mouthpiece
<u>345</u>	.. Acoustic enclosure
<u>346</u>	... Acoustic resistance
<u>347</u>	.... On front side of diaphragm
<u>348</u>	.... On rear side of diaphragm
<u>349</u>	... Bass reflex (e.g., rear wave)
<u>350</u>	... Front wave
<u>351</u>	... Plural chambers
<u>352</u>	... Having internal wave reflecting means
<u>353</u>	... Acoustic damping or attenuating resonator
<u>354</u>	.. Absorbing or attenuating element
<u>160</u>	.. Reflecting element
<u>161</u>	. With mechanical amplifier arrangement
<u>162</u>	. Detail of mechanical vibration coupling to transducer (e.g., tuned vibrating element)
<u>163</u>	. Having bi-directional transducer
<u>164</u>	. Thermal response to, or generation of, sound vibration
<u>165</u>	. By modifying fluid flow
<u>166</u>	. Having a fluid as a conducting element
<u>167</u>	.. Ionized gap, spark, or flame
<u>355</u>	. Housed microphone
<u>356</u>	.. Directional
<u>357</u>	... With plural sound ports (e.g., pressure gradient)
<u>358</u>	.... Plural or variable characteristics
<u>359</u>	.. Windscreen
<u>360</u>	.. Cavity
<u>361</u>	.. Mounting or support
<u>362</u>	... Boom (other than on headset)
<u>363</u>	... Stand or gooseneck
<u>364</u>	... On body or clothing
<u>365</u>	... In electronic apparatus or vehicle
<u>366</u>	... Detachable from support
<u>367</u>	... In headgear
<u>368</u>	... On shock absorbing support
<u>369</u>	. Microphone capsule only
<u>170</u>	.. Compound
<u>171</u>	.. Micromagnetic
<u>172</u>	.. Light modifying
<u>173</u>	.. Piezoelectric or ferroelectric
<u>174</u>	.. Capacitive
<u>175</u>	.. Semiconductor junction microphone
<u>176</u>	.. Conductive diaphragm (e.g., reed, ribbon)
<u>177</u>	.. Dynamic (e.g., magnetic)
<u>178</u>	.. Vibrating electrical contract
<u>179</u>	.. Resistive
<u>180</u>	... Granular or carbon
<u>181</u>	.... Differential
<u>182</u>	. Plural or compound reproducers
<u>370</u>	.. Headphone
<u>371</u>	... Particular cup
<u>372</u>	.... Having mechanical or acoustic sound attenuation
<u>373</u>	.... Openable to ambient
<u>374</u>	... Particular support structure

<u>375</u>	.... And microphone
<u>376</u>	.... Headgear
<u>377</u>	.... Plural bands
<u>378</u>	.... Single band
<u>379</u>	.... adjustable
<u>380</u>	.... Ear insert or bone conduction
<u>381</u>	.... Hook over ear or spectacle
<u>382</u>	.... Sound conducting tube
<u>383</u>	.... Collapsible
<u>384</u>	... Electrical hardware feature
<u>184</u>	.. Different types of diaphragms
<u>185</u>	.. Having common voice coil
<u>186</u>	.. Plural diaphragms
<u>385</u>	. Having body supported structure other than on head
<u>386</u>	. Mounting or support feature of housed loudspeaker
<u>387</u>	.. Directional, directible, or movable
<u>388</u>	.. With furniture, clothing, or image display
<u>389</u>	.. In vehicle
<u>390</u>	.. Boom or support arm
<u>391</u>	.. Grille
<u>392</u>	.. Resilient
<u>393</u>	.. electrical insulation feature
<u>394</u>	.. Electrical hardware
<u>395</u>	.. Mechanical detail
<u>189</u>	. Having protective or sheilding feature
<u>190</u>	. Electrostrictive, magnetostrictive, or piezoelectric
<u>191</u>	. Having electrostatic element (e.g., electret, vibrating plate)
<u>396</u>	. Electromagnetic (e.g., dyynamic)
<u>397</u>	.. Cooling feature
<u>398</u>	.. Having diaphragm support feature
<u>399</u>	.. Conductive diaphragm (e.g., ribbon)
<u>400</u>	.. Movable voice coil
<u>401</u>	... Multiple voice coils
<u>402</u>	.... For different frequencies
<u>403</u>	... Centering from outside bobbin or diaphragm
<u>404</u>	.... Spider
<u>405</u>	... Centering from within bobbin or diaphragm
<u>406</u>	... Field coil
<u>407</u>	... Particular bobbin structure
<u>408</u>	... Pattern
<u>409</u>	... Wiring structure
<u>410</u>	... Coil coating, winding layer structure, or wire
<u>411</u>	.. Including adjustment mechanism
<u>412</u>	.. Magnetic circuit
<u>413</u>	... Having damping
<u>414</u>	... Flux modifying means
<u>415</u>	... Magnetic liquid
<u>416</u>	... Inverted (e.g., within cone)
<u>417</u>	... Armature diaphragm
<u>418</u>	... Armature linked to diaphragm
<u>419</u>	... Not having central magnetic portion
<u>420</u>	... Having central magnetic portion
<u>421</u>	.... Plural magnets
<u>422</u>	..... Like poles adjacent
<u>423</u>	.. Specified diaphragm shape or structure
<u>424</u>	... Plural portions or sections
<u>425</u>	.... Honeycomb

<u>426</u>	... Critically defined material or lamination
<u>427</u>	.... Metal
<u>428</u>	.... Fibrous
<u>429</u>	... Apertures in surface
<u>430</u>	... Dome or round
<u>431</u>	... Flat
<u>432</u>	... Conical
<u>433</u>	.. Basket detail
<u>124</u>	MISCELLANEOUS

FOREIGN ART COLLECTIONS

FOR000 CLASS-RELATED FOREIGN DOCUMENTS

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

<u>FOR100</u>	AUDIO BANDWIDTH COMPRESSION OR EXPANSION (381/29)
<u>FOR101</u>	. With content reduction encoding (381/30)
<u>FOR102</u>	. Delay line (381/33)
<u>FOR103</u>	TIME COMPRESSION OR EXPANSION (E.G., RUN LENGTH CODING) (381/34)
<u>FOR104</u>	. With content reduction encoding (381/35)
<u>FOR105</u>	SPEECH ANALYSIS AND SYNTHESIS COMBINED (381/36)
<u>FOR106</u>	. Using frequency (381/37)
<u>FOR107</u>	.. Pitch (381/38)
<u>FOR108</u>	.. Formants (381/39)
<u>FOR109</u>	. Using time (381/40)
<u>FOR110</u>	SPEECH ANALYSIS (E.G., PHONEME RECOGNITION) (381/41)
<u>FOR111</u>	. Voice recognition (381/42)
<u>FOR112</u>	. Word recognition (381/43)
<u>FOR113</u>	.. Phonetic typewriters (381/44)
<u>FOR114</u>	.. Frequency domain (381/45)
<u>FOR115</u>	. Detection of speech in noise (381/46)
<u>FOR116</u>	. Signal to noise ratio enhancement (381/47)
<u>FOR117</u>	. Speech parameter display (381/48)

- FOR118 . Speech pitch fundamental frequency (381/49)
- FOR119 . Speech formant frequencies (381/50)
- FOR120 **SPEECH SYNTHESIS (381/51)**
- FOR121 . Speech from printed matter (381/52)
- FOR122 . Vocal tract model (381/53)
- FOR123 **ACOUSTICAL NOISE OR SOUND CANCELLATION (381/71)**
- FOR124 **NOISE SUPPRESSION (381/94)**
- BINAURAL AND STEREOPHONIC**
- FOR125 . Speaker arrangement (381/24)
- FOR126 .. Earphone (381/25)
- FOR127 **HEARING AIDS, ELECTRICAL (381/68)**
- FOR128 . Directional (381/68.1)
- FOR129 . Frequency control (381/68.2)
- FOR130 . Bone conduction (381/68.3)
- FOR131 . Gain Control (381/68.3)
- FOR132 . Spectacle (381/68.5)
- FOR133 . Ear insert (381/68.6)
- FOR134 . Hook over ear (381/68.7)
- FOR135 . Specified casing or housing (381/69)
- FOR136 .. Having vacuum tube amplifier (381/69.1)
- FOR137 .. Having battery (381/69.2)
- FOR138 . Having enclosure or housing (381/138)
- FOR139 .. With loudspeaker (e.g., baffle, spatial orientation, etc.) (381/90)
- FOR140 . With acoustic wave modifying structure (381/153)
- FOR141 .. Including sound conducting tube (381/154)
- FOR142 .. Directional (381/155)
- FOR143 .. Sound intensifying or spreading element (381/156)
- FOR144 ... Mouthpiece (381/157)
- FOR145 .. Absorbing or attenuating element (e.g., baffle, obstruction, damping) (381/158)

- FOR146 .. Enclosure or resonant cavity (381/159)
 - FOR147 . Microphone (381/168)
 - FOR148 .. With mounting or support feature (381/169)
 - FOR149 .. Headphone (381/183)
 - FOR150 . Having body supported structure (e.g., earphone) (381/187)
 - FOR151 . With mounting or support feature (381/188)
 - FOR152 . Electromagnetic (e.g., dynamic) (381/192)
 - FOR153 .. Having feature of edge-supported diaphragm (381/193)
 - FOR154 .. Movable voice coil (381/194)
 - FOR155 ... Multiple (e.g., double) (381/195)
 - FOR156 ... Pattern (381/196)
 - FOR157 ... Centering (381/197)
 - FOR158 .. Including adjustment mechanism (381/198)
 - FOR159 .. Magnetic circuit or core structure (381/199)
 - FOR160 ... Armature (381/200)
 - FOR161 ... Magnetic configuration (e.g., tubular or U-shaped) (381/201)
 - FOR162 .. Specified diaphragm shape or structure (381/202)
 - FOR163 ... Flat (381/203)
 - FOR164 ... Conical (381/204)
 - FOR165 . Electro-acoustical transducer mounting or support (381/205)
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